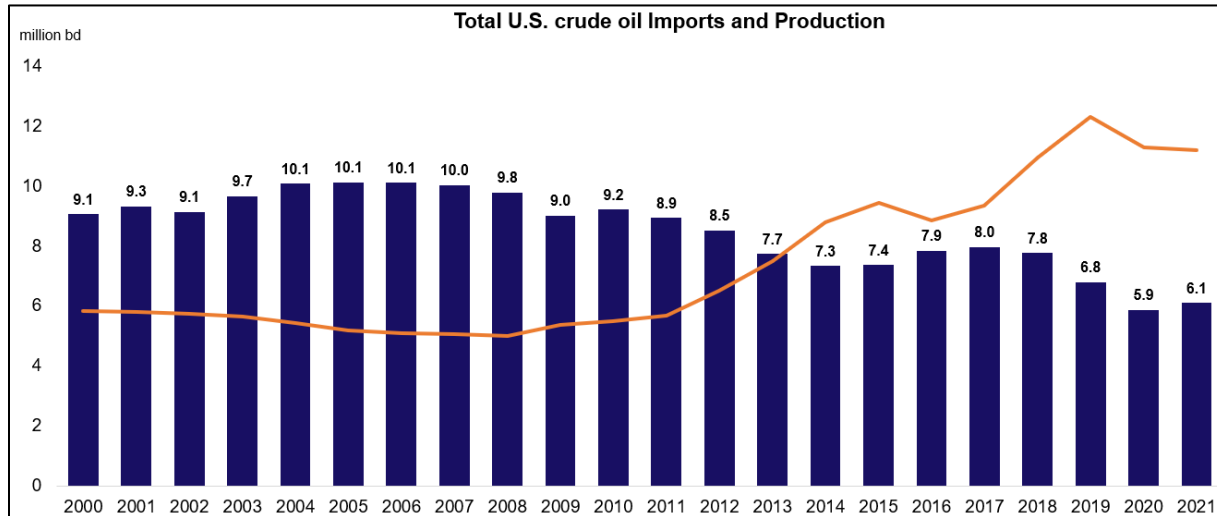




## Crude Oil

U.S. imports of crude oil averaged 6.1 million barrels per day in 2021 and accounted for about 40% of crude processed by U.S. refineries.



61% of imports were from Canada; 10% from Mexico; 6% from Saudi Arabia; and 3% from Russia. **2021 crude imports from Russia averaged 0.2 million barrels per day, the highest level in many years, but still a small share of total imports and total crude oil processed by U.S. refineries (~1%).** U.S. refineries processed 15.1 million barrels per day of crude oil in 2021.

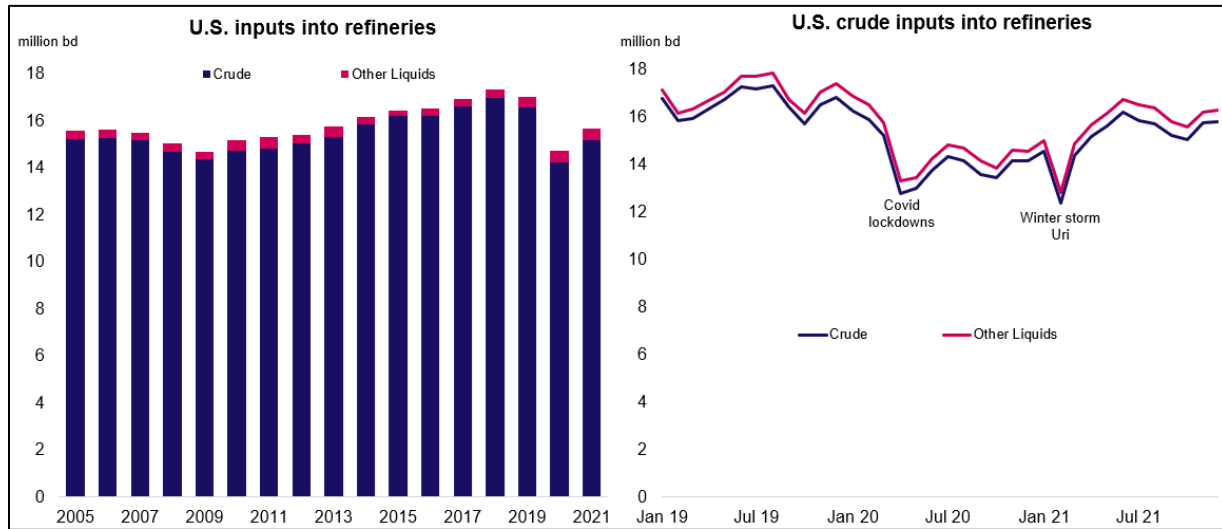
U.S. Imports of Crude Oil									
Thousands of Barrels per Day									
Ranking	Country	2015	2016	2017	2018	2019	2020	2021	2021 % of Total Imports
<b>Total</b>		7,363	7,850	7,969	7,768	6,801	5,875	6,081	
1	Canada	3,169	3,227	3,446	3,707	3,814	3,596	3,728	61%
2	Mexico	688	582	608	665	599	656	591	10%
3	Saudi Arabia	1,052	1,099	949	870	500	498	346	6%
4	Russia	38	38	49	73	134	76	209	3%
5	Colombia	373	442	333	295	318	248	177	3%
6	Iraq	229	419	601	518	331	176	145	2%
7	Ecuador	225	237	207	176	199	169	143	2%

# U.S. Imports of Crude Oil and Petroleum Products from Russia



<b>8</b>	<b>Nigeria</b>	54	207	309	175	186	67	108	2%
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AFPM Analysis of EIA data



AFPM Analysis of EIA data

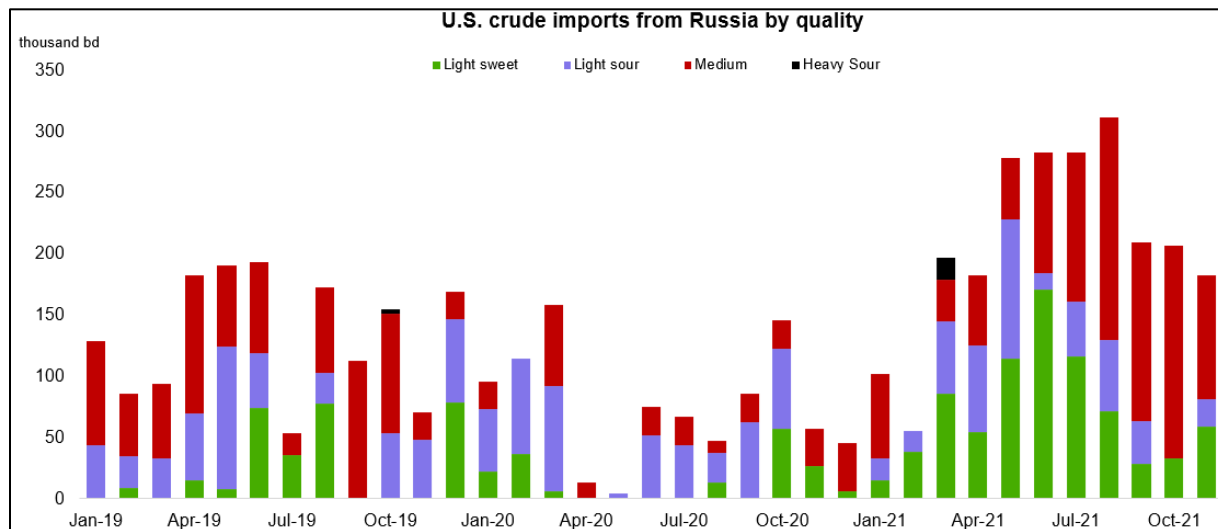
Crude oil from Russia is imported into the Northeast (PADD 1), the Gulf Coast (PADD 3) and the West Coast (PADD 5). **Imports of Russian crude oil into the West and Gulf Coasts increased from 2019 to 2021**, while imports to the East Coast decreased because of changes in global market conditions, as well as disruptions and shifts in supply patterns of U.S. produced crude oil, and changes in U.S. refinery operations.

Imports of Crude Oil from Russia (thousands of Barrels per Day)				
	East Coast (PADD 1)	Gulf Coast (PADD 3)	West Coast (PADD 5)	Total
<b>2015</b>	-	-	38	<b>38</b>
<b>2016</b>	-	7	31	<b>38</b>
<b>2017</b>	6	2	41	<b>49</b>
<b>2018</b>	31	2	40	<b>73</b>
<b>2019</b>	53	32	49	<b>134</b>
<b>2020</b>	38	17	20	<b>76</b>
<b>2021</b>	44	57	90	<b>209</b>

AFPM Analysis of EIA data

Crude oil imported from Russia varies in quality, although most of the crude oil imported from Russia in 2021 was light.

# U.S. Imports of Crude Oil and Petroleum Products from Russia



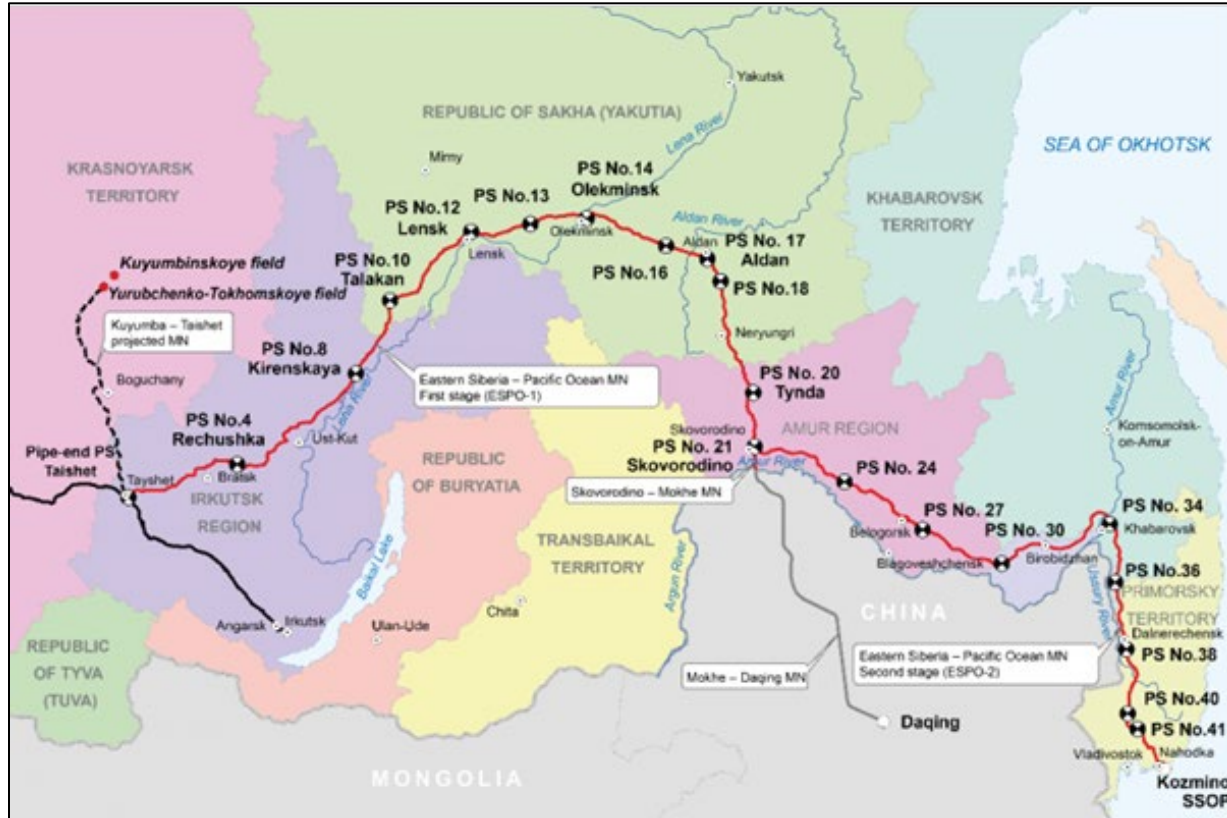
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On the West Coast, Russian crude is imported to supply refineries in Hawaii, California, Washington, and Alaska. **In 2021 supply of Russian crude oil to refineries in California and Washington state increased substantially versus 2019**, helping to offset lower volumes of light sweet crude imports into California from other countries, notably Nigeria, and lower volumes of U.S. produced crude oil shipped by rail to Washington.

Imports of crude oil from Nigeria to the West Coast averaged 61,000 barrels per day in 2019 but dropped to zero by mid-2021 and averaged only 16,000 barrels per day for all of 2021. The decline reflects the challenges Nigeria has faced in returning crude production to pre-pandemic levels. Most of the crude oil imported from Nigeria into the West Coast has been light sweet crude oil and the Russian crude oil supplied to the West Coast is light sweet as well.

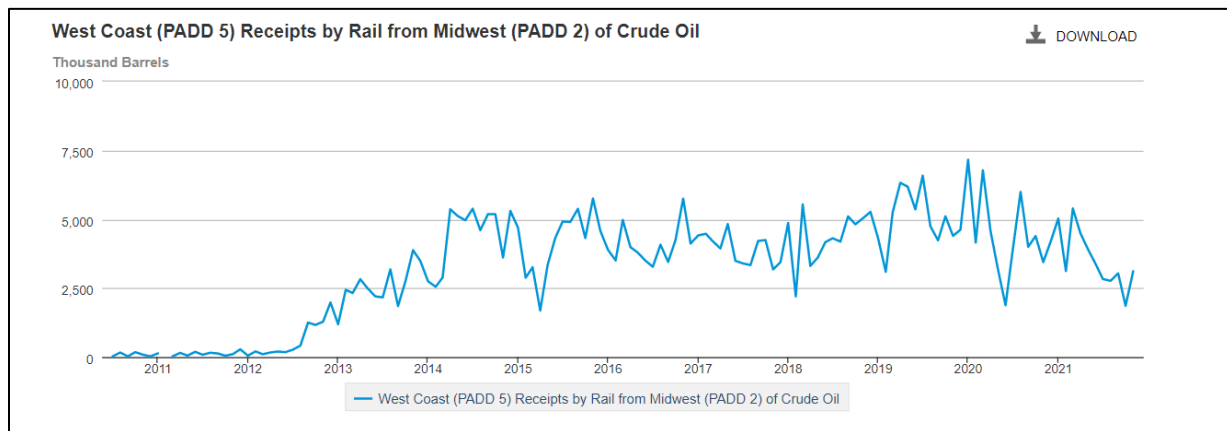
**The increase in 2021 imports from Russia reflects the increased the availability of Russian crude oil for Pacific loadings and the economics for that crude.** The Eastern Siberia-Pacific Ocean (ESPO) pipeline moves Russian crude oil to the Pacific port of Kozmino, which allows Russian crude to be cost effectively supplied to U.S. refineries in Hawaii and on the West Coast. The ESPO pipeline was years in planning and construction – see map below – and was undertaken to allow Russian crude oil to reach a larger global market – prior to the pipeline most Russian crude exports were through the Black Sea or by pipeline to Eastern Europe. The ESPO pipeline can move 1 million barrels per day of crude oil to the port of Kozmino and an additional 0.6 million barrels per day to China.

# U.S. Imports of Crude Oil and Petroleum Products from Russia

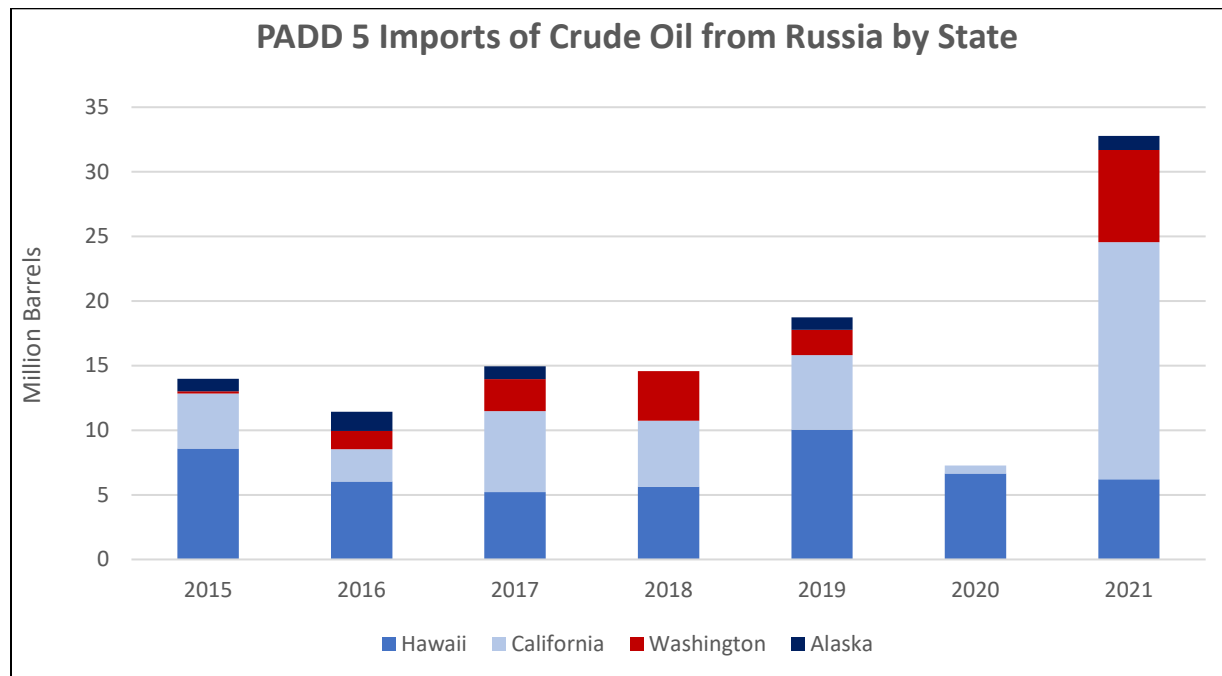


Source: Pipeline Technology Journal

**U.S. West Coast (USWC) refineries rely on imports of light sweet crude oil because access to U.S. produced light sweet crude oil is challenged by geography and transportation/logistics.** Flows of U.S. produced crude oil by rail from the Midwest to the West Coast (Washington) have declined steadily since 2020.



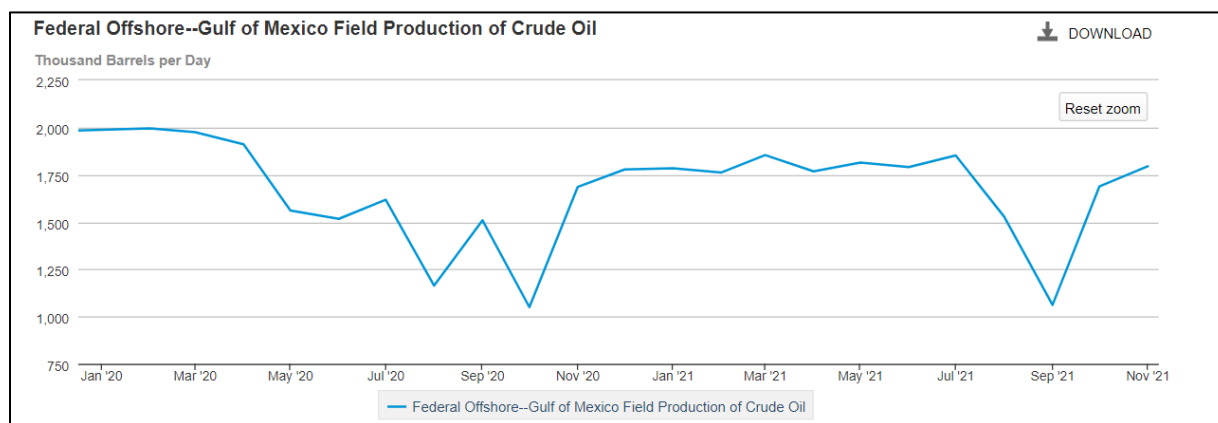
Source: U.S. Energy Information Administration



AFPM Analysis of EIA data

Overall, U.S. imports of crude oil into the West Coast from OPEC+ countries were lower by more than 20% in 2021 as compared with 2019 because of increases in supply from non-OPEC countries, including Brazil, Guyana, Peru, and Argentina.

The 2021 increase in Gulf Coast imports of crude oil from Russia – **from 32,000 barrels per day to 57,000 barrels per day** – resulted from disruptions to U.S. Gulf of Mexico (GOM) oil production because of Hurricane Ida. The U.S. Department of the Interior estimated that Hurricane Ida shut in 96% of crude oil production in the federally administered areas of the GOM.



Source: U.S. Energy Information Administration

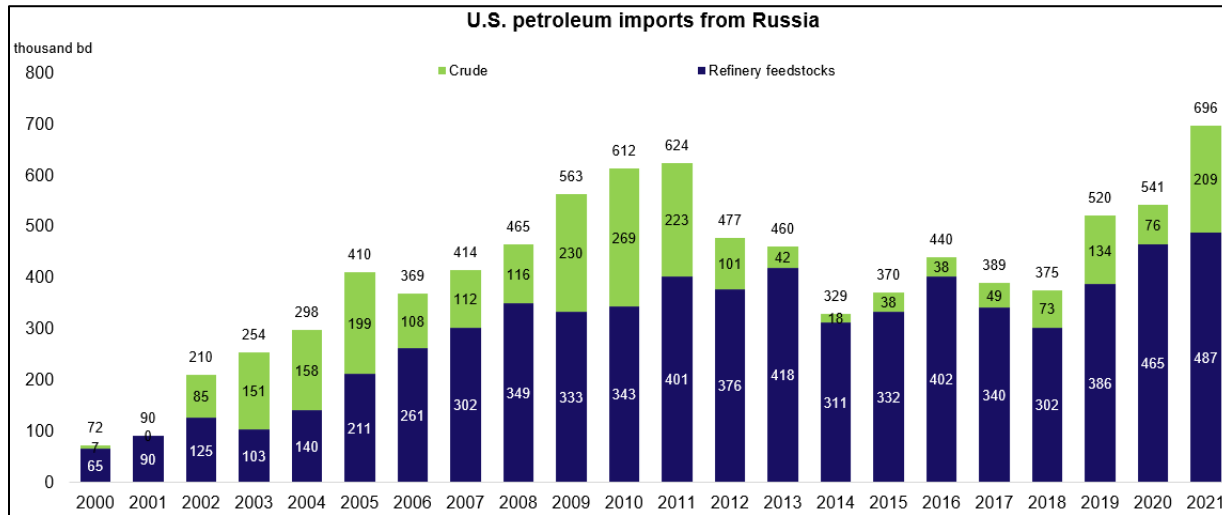
As a result, imports of crude oil into PADD 3 temporarily increased, including imports from Russia of crude oils similar in quality to GOM production. **Russian imports have since returned to very low levels, averaging 29,000 barrels per day in November 2021.**

### Other Petroleum Products

# U.S. Imports of Crude Oil and Petroleum Products from Russia



In addition to crude oil, the U.S. imports other petroleum products from Russia, primarily unfinished oils that U.S. refineries further process into gasoline, diesel, and jet fuel, as well as gasoline blend stocks and petroleum diesel. In 2021, imports of petroleum products other than crude oil averaged 500,000 barrels per day, bringing **total petroleum imports from Russia to 709,000 barrels per day.**

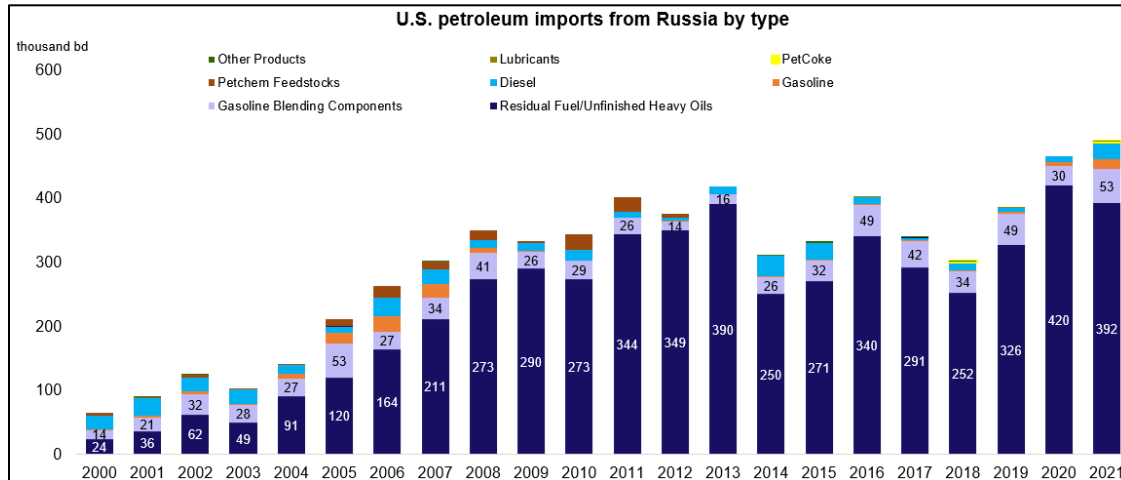


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Imports of Unfinished Oils/Feedstocks and Petroleum Products from Russia						
	Unfinished Heavy Gas Oils	Residual Fuel	Gasoline & Gasoline Blending Components	Diesel Fuel	Other	Total
<b>2016</b>	315	25	53	13	2	407
<b>2017</b>	270	19	48	3	3	344
<b>2018</b>	233	17	46	16	3	314
<b>2019</b>	296	25	69	5	7	402
<b>2020</b>	378	37	50	12	6	484
<b>2021</b>	357	29	80	24	10	500

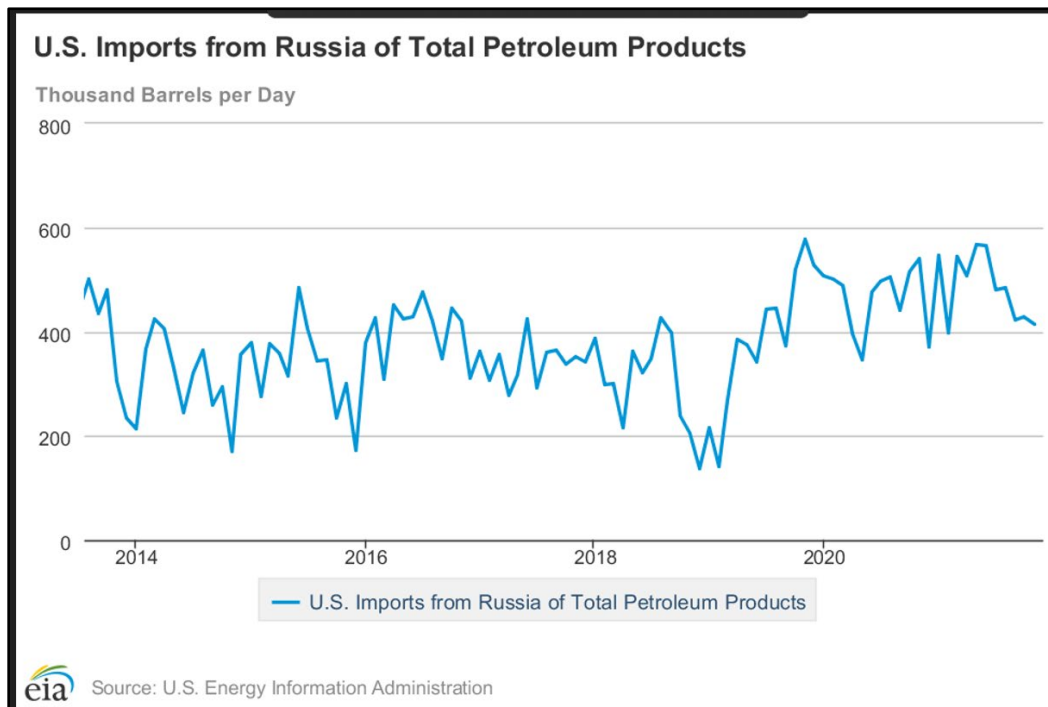
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# U.S. Imports of Crude Oil and Petroleum Products from Russia



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The unfinished oils that are being imported into the U.S. are overwhelmingly high in sulfur and heavier “unfinished oils” that Russia exports because Russian refineries cannot upgrade all the fuel oil they produce, as U.S. refineries can, and because IMO 2020 ended the market for higher sulfur residual fuel as bunker fuel. This chart from EIA shows imports of other petroleum products from Russia. **The increase in imports in 2019 included increased imports of unfinished heavy oils that helped to replace Venezuelan crude oil that U.S. refineries could no longer import.** Unfinished oil imports from Russian are expected to average lower in 2021 than in 2020.



Source: U.S. Energy Information Administration

80% of the imports of Russia’s gasoline and gasoline blending components are into the East Coast; 15% into Puerto Rico; the balance goes into the West Coast.